THE ROYAL ONTARIO MUSEUM—TORONTO

ART AND ARCHAEOLOGY DIVISION - OCCASIONAL PAPER 1

WALTER KENYON

THE INVERHURON SITE

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TORONTO

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The Inverhuron Site

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Special thanks are due to Mr. W. B. Greenwood, Chief of the Parks Division of the Ontario Department of Lands and Forests. His department not only provided the greater part of the funds required for the operation, but also placed at the Museum's disposal every facility for which it was asked. This assistance ranged from the provision of a transit for levelling and the laying out of grid systems, to the use of an aircraft for aerial photography of the site.

Mr. A. Helmsley, Supervisor of Interpretive Programmes for the Parks Division, Mr. P. Addison, the Regional Forester, and Mr. R. Hummel, the District Forester at Hespeler, Ontario, were particularly helpful in coping with a series of minor crises.

Mr. Fritz Knechtel, who supplied the initial stimulus for the project, provided us with a completely furnished summer cottage for two months, and also placed his fine collection of specimens at our disposal for study.

Mr. J. V. Wright, graduate student in anthropology at the University of Wisconsin, was responsible for most of the actual field direction, as well as for much of the planning and analysis. The entire field operation was to a very large extent a joint project in which Mr. Wright shares credit for everything but such inaccuracies as may appear in this report.

For the identification of mineral and faunal remains, I am deeply indebted to the following members of the Museum staff: Dr. R. L. Peterson, Curator of Mammalogy, and Mr. S. C. Downing, his Curatorial Assistant; Dr. W. B. Scott, Curator of Ichthyology and Herpetology; Mr. L. L. Snyder, Curator of Ornithology; and Dr. W. M. Tovell, Curator of Geology.

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Mr. Kenneth E. Kidd, Curator of Ethnology, supervised the total field programme for the Museum, keeping a sharp, paternal eye on the entire operation. His kindness in sharing with me that wisdom which is derived only from years of experience is deeply appreciated.

Introduction

Inverhuron is situated on the eastern shore of Lake Huron between the towns of Southampton and Kincardine, Ontario[1] (*Fig. 1*).

That archaeological material was plentiful in the Inverhuron region has been known for at least eighty years. Along the beach itself, as well as some distance inland, stone tools and pottery have been continually exposed by wind erosion and the slow but steady movement of shifting sand-dunes. It is known locally that those who attended the village school sixty to eighty years ago collected "arrowheads" and, as a favourite recess pastime, hunted for Indian skulls in the sand-dunes north of the building with which to freighten the teachers.

The first serious attempt to investigate these archaeological remains was made by Mr. F. Knechtel of Hanover, Ontario, when his family acquired a summer cottage at the beach some twenty years ago. Since that time, Mr. Knechtel has systematically examined the area, collecting artifacts from the surface, and sorting and cataloguing his specimens until he now has a large and well-documented collection.

As Mr. Knechtel's knowledge and enthusiasm increased, he communicated his finding to professional archaeologists throughout the province, many of whom visited the site. Chief among these was Mr. Thomas E. Lee of the National Museum, Ottawa, who spent considerable time and effort there. The presence of both Iroquoian and Point Peninsula pottery, as well as some early pioneer and trade material, indicated that the site had been more or less continuously occupied for at least two thousand years. However, behind these deposits, which were scattered along the shore, was one of the largest pre-ceramic sites in Ontario, apparently in association with a series of raised beaches. Fire-stones and large spalls formed a dense mantle covering several acres of wind-blown sand. Occasionally, a heavier concentration of fire-stones suggested a disturbed fireplace, and in two or three instances, the presence of ash, charcoal and burned bone fragments confirmed this suggestion.

The fact that the pre-ceramic culture occurred only on raised beaches at an estimated thirty feet above the present lake level suggested a considerable antiquity. This, combined with the massive and crude character of the tools themselves, aroused much curiosity among prehistorians. Who were these ancient hunters, and what was their relationship

[1] Inverhuron Town Plot, Bruce Township, Bruce County, as outlined in original survey 1855. National Topographic Series. Map. ref. 44 deg. 17′ 40″ N. 81 deg. 35′ 40″ W.

to other cultures that were more thoroughly known? The best that could be done was to place them tentatively in the Laurentian Aspect of the Archaic period (Lee, 1952, p. 75).

No large-scale work was done on the problem, however, until the summer of 1956, when the Parks Division of the Department of Lands and Forests announced that the area would be acquired by the Provincial Government of Ontario and set aside as a public park. At the request of Mr. Knechtel, the Parks Division agreed to have the archaeological resources of the proposed park area assessed, and to salvage whatever specimens and information seemed advisable before the construction of roads, camp-grounds and parking lots was begun. At the request of the Parks Division, the Royal Ontario Museum agreed to undertake the project.

Excavation with a crew of six men began on May 1, 1957 and lasted for two months. The results of that work constitute the body of this report.

Since the 1957 excavations, an area of 545 acres is being developed by the Parks Division as the Inverhuron Provincial Park (*Fig. 2*). The bulk of the material excavated in 1957 is in the hands of the Ontario Department of Lands and Forests, the remainder at the Royal Ontario Museum, Toronto.

Fig. 1

INVERHURON IN RELATION TO THE GREAT LAKES

The Inverhuron Area

The general appearance of the Inverhuron Provincial Park area can be seen in the accompanying aerial photograph (*Plate I*).

Geologically, the region consists of a dolomite bedrock belonging to the Norfolk Formation, covered by an overburden of unconsolidated drift laid down by the Wisconsin glaciation (Hoffman and Richards, 1954, pp. 14–15). Immediately behind the present shore of Inverhuron Bay, and extending some distance north and east from the mouth of the Little Sauble River, is a deposit of sand outwash, glacial drift that has been well sorted and re-deposited by river action. Behind this narrow deposit of outwash is an extensive layer of lacustrine material; fine clays and silts deposited by ponded or very slowly moving waters.

Two local formations are of archaeological importance: a small deposit of glacial till, which exists at the eastern edge of Inverhuron Provincial Park, and the sands which extend a short distance inland from the present shore-line of the bay. From the glacial till the Indians obtained dense fine-grained rocks from which to fashion their tools, and upon the sands most of the archaeological deposits occur.

At present, much of the sand area is seriously eroded by wind-action, the only stable portions being those that are protected and stabilized by a forest cover that is predominantly cedar. That this same condition has prevailed for hundreds of years is evident from the distribution of cultural deposits, for in one area near the present shore-line, Late Woodland artifacts occur directly upon the cobbles of an old raised beach. The presence of undisturbed hearths, as well as the condition of the overlying strata, show that this part of the beach was almost free of sand when first occupied. An overlying Iroquoian occupation showed only thin lenses of drift sand running through the cultural debris. These facts suggest that from its Late Woodland occupation up to Middle Iroquoian times, this particular section of beach was virtually free from drifted sand. Less than a hundred feet away, on the other hand, a thin stratum of undisturbed Iroquoian material was found at the top of a five-foot sand-dune. It would appear, therefore, that at least since Late Woodland times, much of the region has been subject to wind-erosion. No doubt the distribution of Indian campsites influenced to some extent the contemporary pattern of erosion, for the accumulation of organic material around an Indian camp would promote a more luxuriant flora, and hence inhibit such erosion.

Excavation

The establishment of a grid system to cover the whole site area was inadvisable because of the enormous area involved and the fact that over 50 per cent of it was densely wooded. It was known in advance, however, that digging would be confined to some half-dozen widely scattered spots. It was known also that towards the end of the dig the area would be surveyed by Mr. J. K. Benner of the Parks Division. It was decided, therefore, to proceed with the excavation at these several spots, and to have Mr. Benner tie them in with his survey at some later date.

In order to facilitate recording and mapping, a number of arbitrary units, 200 feet long and 100 feet wide, were laid out by tape and transit with their major axes running north and south. These units, which we referred to as "Projects," were each treated as separate grids. Each grid consisted of a series of five-foot squares lettered "A" to "T" from west to east, and numbered "1" to "40" from north to south. To distinguish between the different "projects" we assigned to each a capital letter which, by convention, appears as the second item in a catalogue or field number.

Except where hearths and pits were encountered, three-inch levels were maintained throughout the various projects. A combined area of 2,550 square feet, comprising 102 five-foot squares, was excavated.

The Royal Ontario Museum assigned the code letter X to the Inverhuron excavations. A typical field number then, XR.22a.3.16., signifies: The Inverhuron site, X; Project, R: square number 22a; level 3; artifact number from within that level and square, 16.

Immediately behind the present beach a thin but widely dispersed mantle of Iroquoian material was found, overlying, at one place only, a thin lens of Late Woodland material. On the whole, the two cultures could be separated with little difficulty, but there was no clear separation of strata, and the position was further confused by the Iroquois having dug pits down through the Woodland stratum.

Behind the Iroquois deposits, but still fairly close to the beach, were two small deposits of Point Peninsula material. One of these was outside the park area, and was therefore not excavated. The other was seriously disturbed, not too rich, and buried under a heavy overburden of blown sand.

Archaic deposits were encountered somewhat further inland than the ceramic deposits, the closest being about 1,200 feet from the present shoreline. In elevation, the Archaic deposits examined within the Park ranged from 28.6 to 34.6 feet above the current lake level, and were invariably situated on deposits of sand.

In addition to the seven Projects, two further areas were examined. In one, a series of trenches was dug where several burials had been exposed in previous years by wind erosion. Apart from one small shell bead which was found on the surface, these trenches proved sterile.

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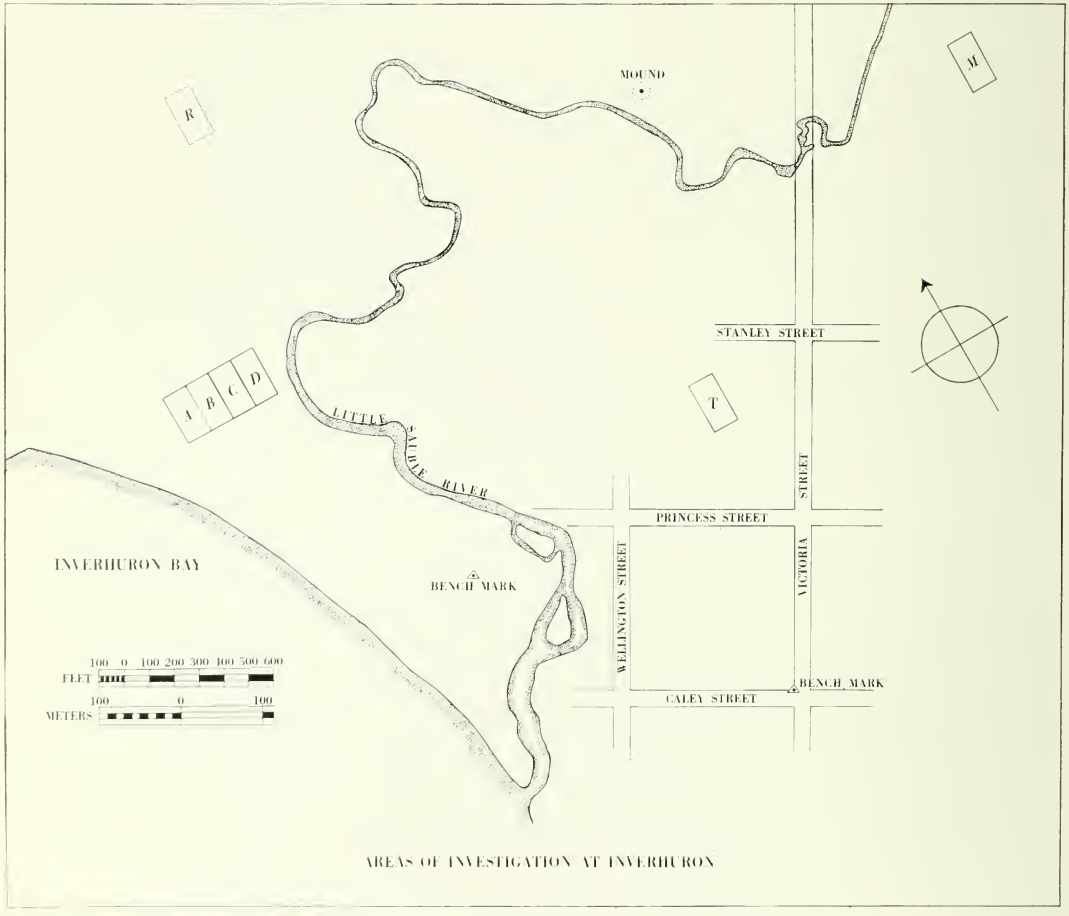
Negative results also attended the excavation of a large mound near the north bank of the Little Sauble River. This structure had long intrigued local residents, and when one of them a few years ago could no longer restrain his curiosity and sank a shaft through the centre of the mound, he encountered a few badly eroded human bones. Excavation in 1957, however, suggested that the feature was a natural formation which had been utilized for one intrusive burial.

Fig. 2



AREAS OF INVESTIGATION AT INVERHURON

The Inverhuron Archaic Culture

Thirty-five squares, totalling 875 square feet, were excavated in Projects M, R and T to depths of from one to three feet. At each of the three sites, archaeological deposits were found with an overlying stratum, when present, of wind-blown sand and, invariably, an underlying stratum of light yellow sand. Both the stratum above and that below the archaeological deposits were identical in appearance and texture, and both in turn were readily distinguishable from the new beach sand along the shore, which has a sharp gritty texture.

The archaeological deposits themselves formed a darker stratum, ranging in colour from a light brown to a very dark grey, depending upon how much ash and organic material was mixed with the sand. During the excavation the upper surface of these cultural deposits could be easily identified, for it differed sharply from the stone-free over-burden in colour. The lower limits of the deposits, on the other hand, were rarely so clearly defined, since cultural material tended to blend imperceptibly into the sterile underlying sand.

Apart from some features which will be described below, one square was much like another. Fire-cracked stones, flint chips and artifacts occurred at all levels and in relative abundance. The average square contained a cultural deposit twelve inches thick, which produced 357 fire-stones.

In an attempt to establish the relationship of the Archaic deposits with the old beach lines (Plate II), elevations were run from the present lake level inland to the surface of the deposits at three spots within the park. These elevations ranged from 28.6 feet at Project R to 34.6 feet above the current lake level of 580 feet above sea level. As a further check, similar elevations were taken at three neigbouring sites which, on the basis of surface collections, represent the same culture. These ranged from 39.9 feet to 45.6 feet above current lake level. These measurements confirmed the impression gathered in the field that sites of this culture tend to follow the 620-foot contour.

Only a very small portion of the Archaic deposits was excavated, and their total extent is still unknown.

FEATURES

The only features encountered were hearths. Many of these might be more accurately described as barbecue pits for cooking large joints of meat, since their method of construction leaves little doubt as to their

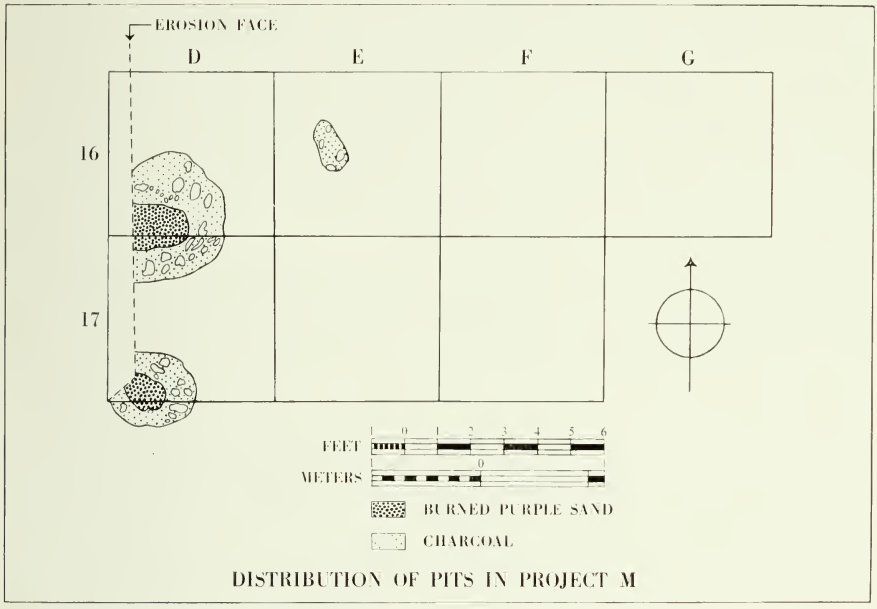
AERIAL VIEW *Raised Beaches at Inverhuron*

PLATE II

purpose. Five of these larger pits were excavated, in whole or in part, in Projects M and R, three showing variations that indicated repeated use. In two instances, however, sections were obtained through pits that had clearly been used only once. Both of these pits were oval in plan view and originally some two and a half feet deep.

PIT 1, PROJECT M (*Figs. 3 and 4*)

Erosion of one end of this pit made accurate measurement impossible, but its maximum diameter was probably about five feet, its minimum



DISTRIBUTION OF PITS IN PROJECT M

Fig. 3

SECTION THROUGH PIT 1, PROJECT M

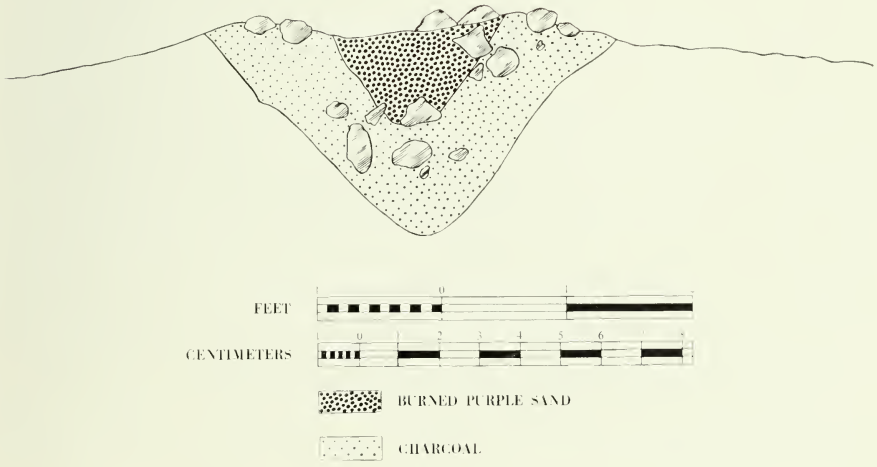


Fig. 4

diameter between three and four feet. In section it consisted of a broad V-shaped deposit of finely powdered black ash and burned sand, interspersed with fire-cracked and blackened stones. In the centre of this deposit was a depression, almost completely free from stones, filled with a

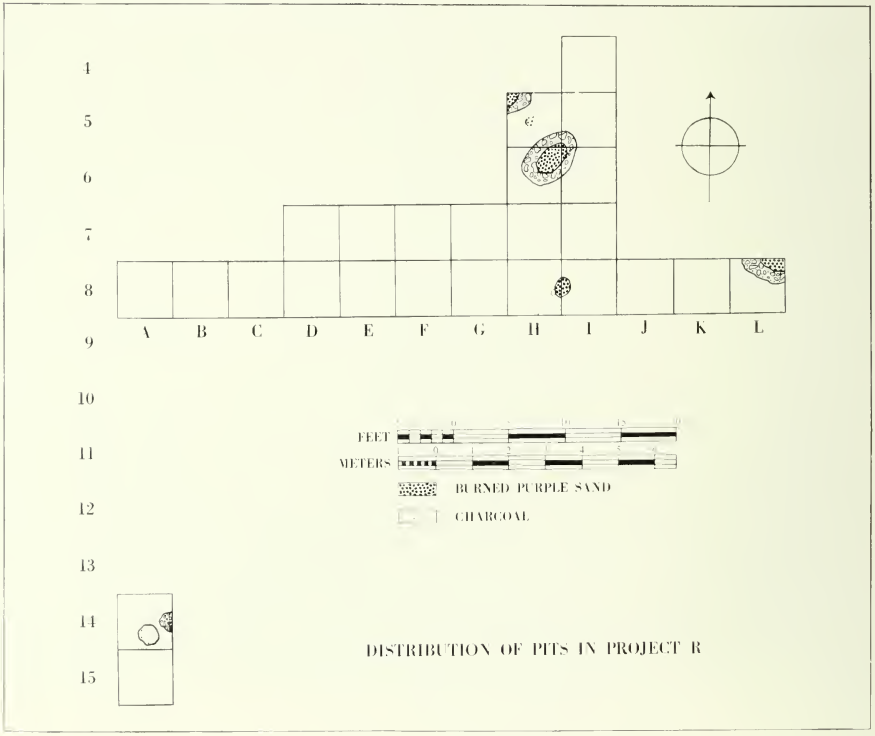
clean, purplish sand. The distinction between the sterile sand into which the pit had been dug and the deposit of black ash and firestones was quite sharp. The division between the black ash and the central deposit of purplish sand was almost equally clear.

PIT 1, PROJECT R (*Figs. 5 and 6*)

The second pit used once only had a maximum diameter of six feet, a minimum of four feet. As in Pit M-1 the distinction between the black ash and the central deposit of burned sand was precise, but in this case there was no distinct division between the black ash deposit and the sand into which the pit had been dug. The distribution of fire-stones was not always as regular as Fig. 6 would indicate, but there was a tendency for them to be clustered into two strata, one above and one below the charcoal deposits.

In addition to these barbecue pits several small hearths about a foot in diameter were found. Most were disturbed, and lacked the central deposit of purplish burned sand.

Fig. 5



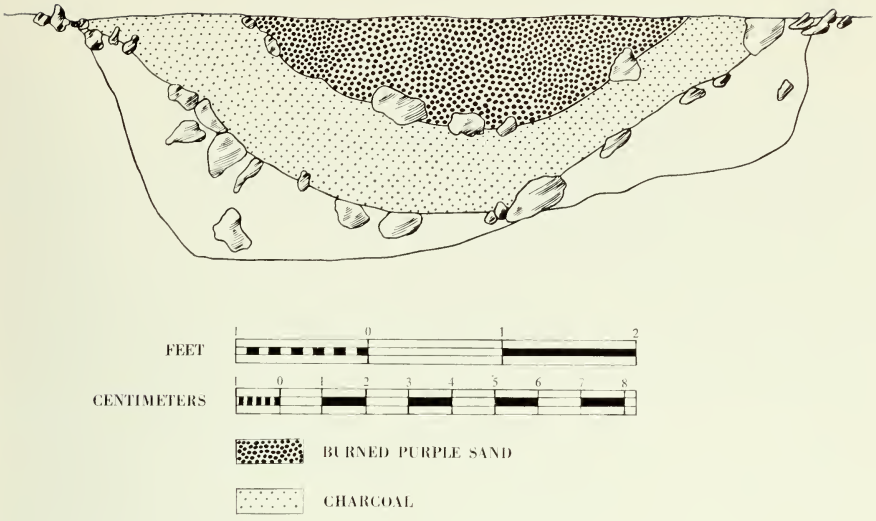


Fig. 6

Very few bones were found in the archaic deposits; the only ones that could be identified were the right scapula of a small white-tailed deer and the dorsal spine of a channel catfish.

ARTIFACTS

STONE (*Plates III, IV and V*)

The raw materials used by the earliest inhabitants in fashioning their stone tools were derived from a number of the local rock formations, together with a cross-section of the pre-Cambrian rocks from northern Ontario. The latter, brought to the Lake Huron region by glacial action, included green quartzites similar to bedrock outcroppings in the Espanola area, together with granites, schists, gneisses, gabbros, shales and slates of unknown derivation.

"Bust-offs." 21

The most common tools encountered were large conchoidal flakes of green quartzite or gabbro. Innumerable specimens of this type, together with the hammer-stones used to detach them from glacial boulders, have been found on the surface by collectors and, in the absence of a more descriptive term, have been called "bust-offs." The twenty-one such tools found in the excavation ranged in diameter from 63 to 126 mm. (*Plate III, Nos. 1–5*). Many showed signs of use along the thinner edge, but only two had been sharpened by secondary flaking.

These must have been multi-purpose tools used for hacking, cutting and scraping. A flake of the fine-grained green quartzite, which was probably the favourite material, has a very sharp edge, ideally suited for

cleaning or gutting fish, or for butchering the largest mammal. Experiment showed that, used as a saw, a thin quartzite flake can deal effectively with tree limbs and saplings up to 50 mm. in diameter.

Apart from the condition of the flakes themselves, the incredible
12 numbers in which they occur on wind-blown patches leaves no doubt that they were deliberately detached and were intended for use in their present simple form. We found no attempts whatever to reduce the large primary flakes to more sophisticated forms.

Projectile points. 15

The projectile points excavated were fashioned from bluish-grey flint, quartzite and light brown chert derived, no doubt, from the local dolomite formation. All are characterized by crude, irregular flaking and a general lack of symmetry. While these characteristics may, in part, derive from the poor quality of the material employed, the workmen seem to have made little effort to utilize even such possibilities as the materials possess. Silhouettes of several of the specimens are so irregular that it is impossible to assign them with certainty to either the stemmed or corner-notched categories. In two examples (*Plate IV, Nos. 12 and 15*) basal and lateral grinding is present; in the others it is absent.

Straight-sided un-notched points–These four light-brown chert points (*Plate IV, Nos. 1–4*) are the most uniform type, but also the most crude. They range from 54 to 60 mm. long, 19 to 32 mm. wide at the base, and 8 to 14 mm. thick.

Stemmed points–The three stemmed points (*Plate IV, Nos. 5–7*) made from flint and chert, are somewhat less crude and have the basic shape of a laurel leaf. They range from 42 to 47 mm. long, all are 21 mm. wide, and from 6 to 8 mm. thick.

Corner-notched points–These three points (*Plate IV, Nos. 8–10*), also of flint and chert, are the most carefully fashioned. They are from 34 to 54 mm. long, 24 to 28 mm. wide, and 5 to 6 mm. thick.

Side-notched points–These five side-notched points of flint, chert and quartzite (*Plate IV, Nos. 11–15*) which include both specimens with basal and lateral grinding, form the most irregular group. Side-notching is, in fact, the only characteristic these points have in common. Unlike the three previous types, which appear to represent more or less discrete stylistic concepts, the side-notched points are merely a residual category, and hence of little theoretical interest.

Spear point or knife blade. 1

Fashioned from bluish-grey flint, this specimen (*Plate V, No. 5*) is 76 mm. long, 27 mm. wide and 8 mm. thick.

Drill base. 1

The only remaining chipped tool, a drill base of red flint (*Plate V, No. 6*), measures 19 mm. wide and 5 mm. thick.

Adze blade. 1

Apart from a few shale and slate fragments too small for identification, only one polished stone tool was recovered. This is a well-finished adze-blade (*Plate V, No. 7*) with concave sides and a slightly flattened oval cross-section. Fashioned from gabbro, it was first pecked into shape, then lightly smoothed. The bit-end, which is very highly polished, exhibits under ten-power magnification a series of faint, parallel scratches made by some abrasive agent, possibly a very fine sandstone. The specimen is 106 mm. long, 58 mm. wide at the bit-end, tapers to 35 mm. at the poll, and is 24 mm. thick.

In outline this adze-blade is unlike anything I have seen from either Ontario or New York State, with the exception of a few Old Copper celts, from which its form may have been derived.

COPPER (*Plate V*)

Point or harpoon. 1

A single copper tool was excavated forming a possible link with the Old Copper Culture (*Plate V, No. 4*). In the form of a hollow cone, open at one side, 41 mm. long and an estimated 12 mm. in diameter at the base, this point or harpoon has what may be a line-hole an inch from its tip. Apart from this possible line-hole, the specimen is apparently very similar to the two conical points found on an Old Copper site at Farquhar Lake by Popham and Emerson (1954, p. 18, Fig. 3, Nos. 11 and 12).

BONE (*Plate V*)

Bone. 2

One specimen, a short awl, had been made from the dorsal spine of a channel catfish, while the other, a splinter awl or graving tool (*Plate V, No. 3*), had one end flattened for piercing or cutting.

Teeth. 2

Two beaver incisors which were found (*Plate V, Nos. 1 and 2*), had been ground diagonally across the labial surface.

CONCLUSIONS

Attempts to find similar or related sites in the archaeological literature on the northeastern region have met with almost complete failure. The

primary fact which calls for explanation is the overwhelming dependence of these people on the large, unmodified flake tool. This, precisely, is what defies explanation, as no other known group seems to have shared this cultural tradition.

The absence of the earliest north-eastern forms of projectile point definitely places this Inverhuron material later than the first, or Paleo-Indian, period of occupation for this region. Combined with the absence of pottery, this places the site somewhere in that long, hazy, middle period known as the Archaic. The absence at Inverhuron of those diagnostic features which define the Archaic cultures of surrounding regions, however, leaves us with no way of relating this site to other known deposits.

In Eastern Canada, I can find only a few sites which produce large, primary flaked tools, and at none of these is a similar emphasis placed on the use of the large conchoidal flake.

Wintemberg and Frank Speck investigated many years ago a large workshop near Tadoussac, Quebec, which had some similarities to Inverhuron in the size and crudeness of the chipped artifacts. Here the similarity ends, for the most abundant artifacts at Tadoussac were chipped blades up to seven inches long. Firestones and hearths, which are so abundant at Inverhuron, were absent from the Quebec site, as were the flake tools which are diagnostic at Inverhuron. Similarly, large, leaf-shaped blades were also preponderant at the George Lake site (Greenman, 1943), at Sheguiandah (Lee, 1954) and at Lake Abitibi (Ridley, 1956).

The two copper artifacts from Inverhuron are reminiscent of the Old Copper Culture, but the connection is too tenuous to be meaningful.

A charcoal sample from the bottom of a pit[1] was submitted for radioactive carbon, or C 14, analysis to Dr. K. J. McCallum, Professor of Chemistry at the University of Saskatchewan. On completion of the measurements, Dr. McCallum stated:

"We prepared one sample of acetylene gas and have made two separate measurements of its radioactivity. We have given this sample our No. S-60. The calculated age from the two measurements is 2,950±100 years and 2,850±100 years respectively. The average value is 2,900 ±75 years where the uncertainties represent standard deviations."[2]

The Mattawan stratum from the Frank Bay site (Ridley, 1954) on which a C 14 date of 2,920±300 years was obtained, while of approximately the same age as the Inverhuron Archaic, apparently represents a different stylistic tradition.

[1] The sample was taken from Pit 1, Project M, Square No. XM.16d, at a depth of two feet.

[2] Personal communication, April 3, 1958.

The Early Woodland (Point Peninsula) Culture

In the forty squares excavated in Projects C and D, a thin stratum of Point Peninsula materials was encountered, usually under a heavy overburden of wind-blown sand. Only two of these squares were undisturbed, the remainder all having been more or less seriously damaged by wind-erosion and previous digging. In many of the squares, cut nails, fragments of glass and the occasional brass button reminded us that an important pioneer settlement once flourished there. Lenses of black ash and charcoal, in which most of the historic materials were found, still remained from the fire which destroyed the settlement.

Immediately below the historic deposit was a thin mantle of buff sand, rarely more than two inches thick, which produced practically all of the Point Peninsula artifacts. Beneath this, and grading imperceptibly into it, was a clean, yellow sand which occasionally produced specimens from its upper three inches.

Only three or four Iroquois sherds were found in this section of the site, all at the upper surface of the deposit.

ARTIFACTS

STONE (*Plate VI*)

In addition to utilized flakes and a number of worked fragments too small to identify, fourteen chipped stone tools were found. The material used in their manufacture was mainly a bluish-grey flint or good quality chert, suggesting that the Point Peninsula people used a different, and somewhat better, source of supply than the later Iroquois—possibly the quarry at Port Franks (Jury, 1949).

Arrow point. 1

The arrow point (*Plate VI, No. 5*) is small, triangular and of fine workmanship, 19 mm. long, 14 mm. wide at the base, and not quite 5 mm. thick.

Spear points. 3

In sharp contrast with the fine workmanship of the arrow point, these three specimens (*Plate VI, Nos. 6 and 7*), probably spear points, are thick, heavy and crudely flaked. The largest is side-notched, almost 63 mm. long, 32 mm. wide and 11 mm. thick. The smallest, also side-notched, is 28 mm. long, 25 mm. wide and 8 mm. thick. Only the tip of the third specimen was found, but this displays the same massive and crude characteristics as the preceding two points.

Scrapers. 10

Only one side-scraper was found, a thin, parallel-sided flake, triangular in cross-section, with a shallow depression worked into the middle of one side, giving it the general appearance of a spokeshave.

Nine end-scrapers (*Plate VI, Nos. 8 and 9*) mostly of the thumb-nail variety, complete the flaked stone inventory. They range from 22 to 44 mm. in length.

Miscellaneous

Other stone artifacts include two hammer-stones, a large fragment of what is probably a chopper, two complete net or line-sinkers and fragments of two others (*Plate VI, Nos. 10–12*). The net-sinkers are simply flat, oval beach cobbles of the local dolomite, notched at both ends for attachment of a line.

COPPER (*Plate VI*)

Fish-hook. 1

A single unbarbed fish-hook was found (*Plate VI, No. 4*), fashioned from native copper and 51 mm. long. Both ends taper to a rounded point from a centre, rectangular in cross section, measuring 2 by 2½ mm. (cf. Emerson, 1955, p. 45).

Although very little has been published on the Point Peninsula culture in Ontario, we know that native or float copper was used by these people. The tradition of making double-pointed awls or fish-gorges which are rectangular in cross-section can be traced back to the Old Copper Culture of the Archaic period. Several of these specimens have been found on the surface at Inverhuron and are now in the Bruce County Museum at Southampton, Ontario.

BONE (*Plate VI*)

Bone. 6

Mammal-bone artifacts from these deposits consisted of six battered fragments which are probably awls (*Plate VI, Nos. 2 and 3*), though some may have been needles. One awl (*No. 2*) is fashioned from the dorsal spine of a channel catfish.

Teeth. 1

A beaver incisor (*Plate VI, No. 1*) had been carefully worked to a flattened point which suggests a graving tool.

POTTERY (*Plate VII*)

Point Peninsula pottery from the Inverhuron site is a crumbly ware manufactured by the coil method, as the absence of lamination and the presence of numerous coil-breaks show. Tempering is present in large

quantities and consists of coarse particles of ferromagnesium which frequently attain a size of 9 mm. This material was probably derived from a gabbro or allied rock in the glacial drift deposit at the edge of the park. Sherds are predominantly buff but occasionally salmon-pink in colour. Cross-section colouring is uniform throughout, suggesting that the pots were well fired. From a random sample of 250 body sherds an average thickness of 10.24 mm. was established, with upper and lower limits of 14 and 6 mm. respectively.

Vessels were apparently almost vertical-sided, with slightly everted, thin rounded lips as a rule, and sharply pointed bases (*Plate VII, No. 7*). The one vessel which we were able to reconstruct in part has an oral diameter of between 130 and 150 mm. (*Plate VII, No. 15*).

The excavations produced a total of 525 Point Peninsula sherds, of which 469 are body sherds, and only fifty-six are rims. Exterior decoration, present on all but two body sherds, is as follows:

Rectangular dentate stamp	307	(*Plate VII, Nos. 8 and 9*)
"Incised"	36	(*Plate VII, No. 5*)
Rocker-stamp	27	(*Plate VII, Nos. 6 and 10*)
Cord-wrapped stick	2	
Push-pull	1	
Miscellaneous	94	

Because most of the Point Peninsula sherds are very small, it is frequently impossible to see clearly which decorative technique had been employed. These dubious sherds, together with a few which bear the imprint of what was probably a cord-wrapped paddle, and many more which have had their surface seriously sand-blasted, are placed in the miscellaneous category. The "incised" group includes both cross-hatched sherds with irregularly spaced shallow incisions varying between 2 and 13 mm. apart, and "combed" sherds which appear to have been striated by a sideways movement of the same tool used to make the dentate impressions that were so popular with this group.

The interiors of about two-thirds of the body-sherds are also decorated. Of a total of 324 sherds which can be unmistakably classified as to both exterior and interior decoration, the interior is as follows:

Dentate stamp	112	
Horizontal striae	103	(*Plate VII, No. 11*)
Plain	109	

Only thirty-seven of the fifty-six rim-sherds can be analysed with any precision, the remainder being tiny fragments about the size of a thumbnail. Of these thirty-seven rims, twenty-four, or 63.1 per cent have been called Inverhuron Dentate.

Inverhuron Dentate (*Plate VII, Nos. 12–16*)

The twenty-four sherds have the following decorative characteristics:

Rim Decoration

External: Short linear dentations, spaced about 6 mm. apart slope downwards to the left at about 45 degrees (*Nos. 12–14*). These extend from the lip to between 12 and 25 mm. below the lip. Below these linear dentations, from two to four horizontal lines of dentate impressions appear on fourteen of the sherds, and more or less vertical impressions on the remainder. The oblique portion of the exterior design is absent from a few examples (*No. 16*).

Internal: Very similar to the external decoration. Short lines of dentate impressions appear on fifteen rim-sherds, the remainder having interior striae and vertical lines of dentate impressions in equal numbers. The lip of one rim-sherd had been somewhat flattened and roughened by the irregular application of a dentate stamp.

The tools used to make these impressions were probably short comb-like objects with an average of three square-ended teeth to the centimetre.

Apart from the twenty-four Inverhuron Dentate sherds, a further thirteen rim-sherds are analysable. Because we have so little data on this series of vessels, virtually nothing can be said as to their size or shape. In colour, friability and size and amount of tempering, however, they are indistinguishable from the Point Peninsula pottery described above. These come from eight different vessels and are referred to below as Pots A–H.

Pot A

A rim from this pot (XD.9m.1.2) is 6 mm. thick, and decorated with a vertical rocker-stamped design on both the interior and exterior. The square lip, which was probably scalloped, also bears a dentate stamp design resulting from the application of the same tool at closely spaced intervals, and at right angles to the edge of the vessel. This specimen could possibly be classed with the Point Peninsula Rocker Stamped type of Ritchie and MacNeish (1949, p. 102).

Pot B

Sherds from this vessel (XD.9m.1.9) are 10 mm. thick, with irregularly applied dentate stamp impressions on both the interior and exterior. The smooth rounded lip has broad, shallow notches 10 mm. apart, made by some object which was obliquely applied at right angles to the lip both internally and externally.

Pot C (Plate VII, No. 1)

The single rim-sherd from this pot is 9 mm. thick, slightly everted, and has a square lip with deep notches 6 mm. apart. Exterior decoration consists of a cross-hatched design with incised lines, 6 mm. apart, meeting at an angle of 30 degrees. The interior has short lines of closely spaced dentate stamped impressions sloping downward to the left for 16 mm., below which are horizontal striae. This specimen, as well as the three following sherds, can possibly be classed with the Kipp Island Crisscross material of Ritchie and MacNeish (*ibid.*, p. 104).

Pot D

A single sherd, 10 mm. thick, comes from an almost vertical-sided vessel with a square, undecorated lip. Exterior design consists of lines of dentate stamp impressions, 6 mm. apart, sloping downward to both right and left at 45 degrees. Interior decoration consists of closely spaced rocker-stamped impressions presumably made by the same tool as that used on the exterior.

Pot E (Plate VII, No. 3)

This is apparently very similar to Pot D, although the single remaining sherd from this vessel, at 11 mm., is somewhat thicker. The design is very crudely executed. As the interior of this sherd is almost completely eroded away, we are not certain of its interior design. There is a suggestion, however, that, as in Pot D, this example bore vertical, rocker-stamped impressions.

Pot F (Plate VII, No. 2)

Represented by a single sherd 9 mm. thick, this pot has a slightly everted rim. All the designs on this sherd seem to have been made by pressing the corner of a small rectangular stick or the edge of a bone awl into the wet clay. The exterior design is a criss-cross pattern with lines 6 to 10 mm. apart, sloping downward to both right and left at an angle of some 20 degrees from the vertical.

Pot G

Represented again by a single sherd, this pot is very crudely made, 5 mm. thick, and with a sharply everted lip. The only decoration present on this small sherd is a horizontal line of cord-wrapped stick impressions, and a series of irregularly spaced incisions made by applying some very thin object obliquely against both the inner and outer edge of the lip.

Pot H (Plate VII, No. 4)

The remaining vessel was apparently vertical-sided and has a flat, splayed-out lip 15 mm. thick. Below the lip, the sherd is 11 mm. thick.

Both the interior and exterior designs on this specimen are almost impossible to interpret with any precision. The difficulty is caused by the surface having been smoothed after the design was applied. Many of the features which would assist us in identifying whatever was pressed into the wet clay were obliterated by this smoothing. Almost certainly, however, the design was made by either cording or fabric. Exterior design consists of 4 horizontal lines, 5 mm. apart, with the top line 19 mm. from the rim. Above this element, lines of small, shallow punctations, 6 mm. apart, slope upwards to the right at 45 degrees. Interior decoration is almost identical with the corded impressions on the exterior, but was applied at an angle of 45 degrees sloping downward to the left.

In the centre of the flat lip of this vessel is a shallow groove, 2 mm. wide. On either side of this is a series of irregularly spaced notches made by impressing a narrow object obliquely into both the interior and exterior edge of the lip.

CONCLUSIONS

The people who left the Point Peninsula remains at Inverhuron were probably attracted to the region by the same excellent fishing that enticed later peoples to the area. The presence of both net-sinkers and fish-hooks attests to their interest in fishing, and the number of fish-scales and bones that were excavated shows that their efforts were successful. Whether they depended on fish to the same degree as later people it is impossible to say, for in the seriously disturbed older deposits fewer bones would survive. The impression gathered in the field, however, was that these deposits contained only the small amounts of fish refuse that would accumulate from day-to-day living.

The relationship of this Early Woodland manifestation to other sites of this same time-period is not at all clear. One exception, however, is the lowest stratum of the Burley site excavated by Wilfrid and Elsie Jury some eighty miles to the south. In the lowest stratum of their site, extending from 6 to 8.5 feet below the surface, the Jurys found pottery which is virtually identical with the coarse, crude pottery which I have called Inverhuron Dentate (Jury, 1952, pp. 56–7, and pl. 9). A charcoal sample from the lowest Burley stratum was dated by Libby at 2,619±220 years (*ibid.*, p. 73). This date, in the absence of more direct evidence, we may accept as approximate for the very similar Inverhuron material.

A comparison of the Point Peninsula pottery from Inverhuron with that of other sites in both Ontario and New York also suggests that this site was occupied fairly early in the Woodland period. It must be remembered, of course, that our sample of rim-sherds is totally inadequate from a statistical viewpoint. On the other hand, the percentage of sherds

decorated with a linear dentate stamp does suggest a considerable antiquity, for this is an early decorative technique producing a minority type—Vinette Dentate—at the lowest ceramic levels of the Vinette site. The more intricate designs, executed with a pseudo-scallop shell, stylus, cord-wrapped stick and curved rocker-stamp, which characterize the Middle and Late Point Peninsula sites in New York State are virtually absent at Inverhuron.

Both Ritchie and MacNeish have suggested that the course of development of Woodland cultures in Ontario differed in several respects from that of New York State. Following his survey of the Trent waterway, for example, when he compared his findings with his previous work in New York, Ritchie wrote: "In the southern Ontario sequence our data suggest a generally congruent development in which, however, a second and more classic Woodland tradition figures prominently" (Ritchie, 1949, p. 46; cf. Ritchie, 1944, p. 164). In their definition of Vinette Dentate, Ritchie and MacNeish suggest that it is ". . . an Early Woodland type whose ultimate origin and relationships extend northwestward from the Great Lakes region" (Ritchie and MacNeish, 1949, pp. 100–102).

The relationship between Inverhuron Dentate and Vinette Dentate is not entirely clear. Certainly the Inverhuron ware is coarse, crude and very poorly made when compared with the delicately executed Vinette Dentate of New York State. Yet the stylistic concepts involved appear to be very similar. In the present state of our knowledge, then, it is probable that the Point Peninsula deposit at Inverhuron represents a fairly pure form of this second Woodland tradition of Ritchie, and dates from the latter stages of the Early Woodland period.

Until we get a number of C-14 dates from other Point Peninsula sites in Ontario, it is impossible to arrange them in chronological order, since it is possible, indeed probable, that an early Woodland tradition would persist in the outlying regions, while more sophisticated forms were developing in the central area. Certainly there is little visible connection between the Inverhuron and Burley sites on the one hand, and those of New York and eastern Ontario on the other.

In the New York series (*ibid.*, p. 118, Fig. 42), the earliest ceramic tradition, Vinette 1, is a plain, undecorated ware with the interior and exterior surfaces roughened by the application of a cord-wrapped paddle. This is the dominant type in both the lower and middle levels of the Vinette site. It is replaced as the major type by Point Peninsula Rocker Stamped in the upper levels of Vinette, as well as at the later Wickham site. Vinette Dentate exists throughout the New York sequence, but always as a minority type, reaching a maximum of 18 per cent in the upper levels of the Vinette site, and falling off sharply at the later Jack's Reef site.

In eastern Ontario, the situation is essentially similar with regard to the occurrence of Vinette Dentate pottery. It is present as a minority at both the Kant site and the Malcolm site. At the former (Emerson, 1955, p. 39) the dominant type is Vinette Complex Dentate (20 per

cent), closely followed by St. Lawrence Pseudo Scallop shell (17 per cent), Wickham Incised (16 per cent), Point Peninsula Rocker Stamped (15 per cent), Kant Rectangular Dentate (14 per cent), and finally, Vinette Dentate, which constitutes only 6 per cent of the sherds.

At the Malcolm site (Dailey and Wright, 1955, p. 18, Fig. 8). Point Peninsula Corded was the dominant type (25 per cent), with Vinette Dentate running a close second at 21 per cent. In addition to these a wide range of minority types was present, linking the site to various New York State manifestations of the upper Middle Woodland period.

A similar situation apparently prevails at the Frank Bay site on Lake Nipissing. Here, in a stratified site well within the Canadian shield, Ridley found a component which he correlates with the classic Point Peninsula culture of New York State (Ridley, 1954, pp. 43–4).

It would appear, then, that the Point Peninsula culture on the east side of Lake Huron was related only indirectly to both the "classic" Point Peninsula of New York State, and to what is probably a regional variation of Point Peninsula with a greater emphasis on pseudo scallop shell in eastern Ontario and at Lake Nipissing.

Late Woodland Culture

In Projects A and B, nine squares, eight of them contiguous, produced material from two different cultures, Late Woodland and Iroquois. No clear stratigraphy was encountered, as the lower portions of the Iroquois stratum were almost always mixed with the upper portions of the Woodland material. While the bulk of the Iroquois material, however, comes from a stratum of dark, ashy sand, the Woodland material comes from the very bottom of this stratum or from the upper surface of the underlying yellow or buff sand (cf. Wintemberg, 1948, p. 15).

Despite this degree of stratigraphic confusion, a clear pattern emerges from the vertical distribution of the 918 sherds excavated in Projects A and B when they are viewed in tabular form.

	LATE WOODLAND		IROQUOIS	
LEVELS	RIM-SHERDS	BODY-SHERDS	RIM-SHERDS	BODY-SHERDS
1	–	40	37	247
2	–	36	11	160
3	2	57	15	83
4	28	195	2	5

With the exception of a few scattered body-sherds, a rim-sherd (*Plate VIII, No. 3*) and a stone artifact (*Plate VIII, No. 4*), the entire Late Woodland complex, which included numbers of fish bones and scales, was scattered around a single large shallow hearth.

ARTIFACTS

STONE (*Plate VIII*)

Apart from flint chips, eighteen stone artifacts were recovered. These comprise a hammerstone, a chopper (*No. 4*), the poll end of an adze-blade, three flint end-scrapers, a small side-scraper, the tips of two crudely flaked chert projectile points, one complete projectile point of bluish-grey flint and eight oval to rectangular objects that were probably used for scaling and cleaning fish (*Nos. 5–9*).

Fish-scalers? 8

These artifacts, mostly of chipped slate, vary somewhat in form, but on the whole are remarkably similar to the ulu of the Eskimo. The largest (*Plate VIII, No. 9*) is 168 mm. long, 82 mm. wide and 6 mm. thick, and has been worn smooth along one edge through repeated use. The smallest of the series is almost perfectly oval in outline (*Plate VIII, No. 5*), with a major axis of 66 mm., a minor axis of 44 mm., and a

maximum thickness of 8 mm. Both sides of this specimen had been worn fairly smooth by the hand of the workman using it. At first glance it appears slightly waterworn, but close examination reveals a few tiny ridges near the edge that would not have survived even moderate

abrasion by water. On most of the cutting edge, fresh flake-scars suggest that the tool had been sharpened shortly before being lost.

The only other specimen that exhibits a similar wear pattern is also oval (*Plate VIII, No. 7*), and is 111 mm. long, 66 mm. wide and 11 mm. thick. Despite traces here and there of its formerly dulled cutting edge, this specimen had also been freshly sharpened. Although the two faces show very little wear, such wear as is present is confined to the centre, suggesting that the implement was grasped in the same manner as an Eskimo woman holds her semi-lunar knife.

The remaining examples show very few signs of use, with the exception of one specimen (*Plate VIII, No. 8*) which may not even belong in this category. Chipped from a coarse, grey slate, it is almost rectangular in outline, 120 mm. long, 44 mm. wide and 17 mm. thick. Slight wear on this specimen is evident on both edges and on the broader end. Both the nature of the abrasions and the thickness of the abraded edges suggest that it was used as a chopper rather than a knife.

POTTERY (*Plate VIII*)

The pottery sample is very small, consisting of fragments from the four pots referred to below as Pots A–D. All sherds are of a light brown grit-tempered ware manufactured by the coil method. Body-sherds were roughened by the irregular application of a cord-wrapped paddle. Vessel shapes are incompletely known.

Pot A (Plate VIII, No. 1)

This is the most complete of the four. Almost all the rim and part of the body were recovered, showing that the pot had a diameter of 228 mm. at the mouth, and sloped gently inward to a diameter of 178 mm. at the most constricted point on the neck, 50 mm. below the lip. Rim and body do not differ in thickness, but both are irregular, with an average of about 8 mm.

Decoration is present on both exterior and interior of the rim, as well as on the slightly rounded lip. Exterior decoration on the upper 19 mm. of the vessel consists of a closely spaced push-pull design sloping downwards to the left at 60 degrees from the horizontal. This design was apparently executed with the corner of a thin, rectangular cord-wrapped paddle that had been wound to within 3 mm. of the end. On a plasticine impression, both the bare end of the paddle and the first one or two cords are clearly visible.

Below this band of impressions a horizontal line of short gashes,

each apparently made by the same instrument, encircles the vessel. This tool, held at a different angle, was probably used also to form a lower horizontal band of closely spaced oval punctations. The entire decorative band extends 32 mm. below the lip of the pot.

On the lip, and extending 9 mm. down the interior of the rim, are impressions of what is probably either netting or basketry. Below this, 19 mm. from the rim, is a line of circular punctations made by impressing a hollow reed or bird-bone into the wet clay every 19 mm., which raised slight bosses on the exterior surface. The reed or bone that was used was 3 mm. in diameter.

Pot B (Plate VIII, No. 2)

Apparently of similar size, shape and decorative treatment as Pot A, this vessel was also decorated with a cord-wrapped paddle. Represented by one rim-sherd 8 mm. thick, this specimen has a slightly splayed-out lip which has been impressed both inside and out at closely spaced intervals with the edge of the paddle. Interior decoration with this implement extends downward for 25 mm., below which is a horizontal line of punctations 19 mm. apart, made by some solid semi-circular object 4 mm. in diameter. Again, slight bosses are visible on the exterior surface. Exterior decoration, below the cord-markings on the short, splayed rim, consists of four horizontal bands of irregular but closely spaced punctations which were probably made with a sharp corner of the paddle.

Pot C (Plate VIII, No. 3)

The third vessel in this series is again represented by only one rim-sherd. It is 9 mm. thick and has a smooth interior below a fabric impression extending downward 3 mm. from the rim. On the square lip is the imprint of a loose twine weave. The exterior surface has been impressed with what appears to be a loosely woven fabric. Unfortunately, the sherd is too small to get a clear picture of the type of fabric employed. An additional difficulty is presented by the fabric having been moved during its application to the wet clay. Were it not for the clear impression of both the warp and weft threads immediately below the top of the vessel, the roughened surface would almost certainly have been attributed to the action of a cord-wrapped paddle. A row of punctations 32 mm. apart, made by some irregular object which raised slight interior bosses, encircles the vessel 25 mm. below the rim.

Pot D

The remaining vessel is represented by one tiny rim-sherd which apparently has a cord or fabric-roughened exterior, a smooth interior, and a square lip. Decoration is present, but the sherd is too small to be analysed with any certainty.

CONCLUSIONS

In view of our limited knowledge of Late Woodland cultures in Ontario, no very significant conclusions can be drawn from the small sample of artifacts excavated at Inverhuron. There is in the existing literature, for example, no suggestion that the chipped slate, ulu-like knives or scrapers were a usual trait of Ontario's Woodland cultures. Very similar specimens appear sporadically throughout the province, but always in different contexts and fashioned from different materials (e.g. Ridley, 1954, p. 42, Fig. 17a; and Kidd, 1948, p. 102). Even less can be said of the pottery. It is presumably of about the same time-period as the Krieger material excavated near Chatham (Kidd, 1954), but exhibits few stylistic similarities with that site.

The presence of fish-bones and scales suggests that the Woodland group, like the later Iroquois, was attracted to the site by the excellent fishing it afforded. In other respects, however, the available data, though wholly inadequate, do suggest that there are some marked differences in the cultures of Ontario and New York State in the pre-Iroquoian period (cf. MacNeish, 1952b, p. 51).

The Iroquois Culture

Iroquois remains were investigated in Projects A, B and D, with the major concentration at A. These, so far as is known, are the only remaining Iroquois deposits within the park. Until fairly recently, however, there were extensive deposits south of the creek, and even today the occasional sand-blasted sherd can be found there.

A typical section through the Iroquois deposits shows that as a rule these people camped on the sand, leaving a deposit of cultural debris that varied between five and nine inches in thickness. In only one square were Iroquois artifacts lying directly upon the cobbles of an old raised beach, and thicker deposits were found only in pits. In the absence of the ash-dumps usually associated with Ontario Iroquois sites, it is probable that this station was not a village, but a camp-site occupied only during part of the year. This is strongly suggested also by the presence of a number of shallow depressions, probably all of which were hearths, as well as by the types of faunal remains associated with them. That the camp was visited in the spring and early summer, rather than late summer and fall, is evident in bird, mammal and fish remains. Among the birds, passenger pigeon, common loon, and duck occur in that order of frequency; among the mammals, black bear, fisher, otter, red fox, domestic dog, woodchuck, eastern chipmunk, red squirrel, beaver, deer-mouse, porcupine, eastern cottontail, wapiti and whitetail deer are all present, though the sample is too small to work out any meaningful frequency relationship. The most common faunal remains, however, were fish-bones and scales, which were found in countless thousands.

Analysis of this fish-refuse shows that the species formerly taken by the Indians are the same as those found today in Inverhuron Bay and the Little Sauble River. In order of frequency, the following species were present: yellow walleye, smallmouth bass, common or white sucker, channel catfish and lake trout. The lake trout, though represented in our sample, was so scarce that no conclusions can be drawn from its presence.

In our excavations, fish refuse was scattered thickly throughout projects A and B, with the heaviest concentration in square number A.14.1. Here, a dense, compact mass some three inches thick was encountered, extending an undetermined distance to the north. Both the size of the concentration, and its purity, suggest that this mantle of fish refuse had been deposited at one and the same time, and could only have resulted from some operation in which a vast number of fish were taken to be then cleaned and dried for future use (Waugh, 1916, p. 136).

There is nothing to show how the Iroquois caught their fish. Neither hooks nor net sinkers were found in the Iroquois deposits although many sinkers were surface-collected in the immediate area. The very large deposits of fish refuse, however, suggest an efficient method of

fishing and this, in the light of both ethnological and archaeological evidence, would almost certainly be a weir in the Little Sauble River (cf. Biggar, 1932, p. 246).

ARTIFACTS

STONE (*Plate IX*)

Of thirty-one stone artifacts excavated, eighteen are unidentifiable fragments of chipped stone tools. The remainder consist of a hammerstone, a knife, six scrapers, four projectile points and an unfinished adze-blade. Almost all the flakes and flake tools are of poor quality chert, probably of local origin.

Projectile Points. 4

One is a crudely retouched flake, 19 mm. long, notched only on one side, the remainder are side-notched triangular points (*Plate IX, Nos. 9–11*). Two of these (*Nos. 9 and 11*) were apparently produced by simply notching the thin, triangular specimens that appear throughout the Iroquois sequence and can be traced back through both Late and Middle Woodland cultures (Kidd, 1954, p. 151; Dailey and Wright, 1955, p. 9). Similar points have been described by Wintemberg (Wintemberg, 1928, p. 9 and 1936, p. 23). That they persisted into the late prehistoric period and possibly the early historic is evident from the Sidey-Mackay site (Wintemberg, 1946, Plate XIX, A 9, p. 157), although their relative frequency seems to have declined sharply.

Scrapers. 6

The scrapers are asymmetrical flakes worked along the cutting edge only, with no attempt made to give them a standard form. Two end scrapers were fashioned from superior bluish flint (*Plate IX, No. 7*), and one large scraper fragment from fine-grained quartzite.

Knife. 1

Crudely fashioned from a lump of poor-quality chert, the knife (*Plate IX, No. 8*) measures 57 mm. long, 25 mm. wide and 9 mm. thick.

BONE (*Plate IX*)

Antler. 2

One is an indefinable object (*Plate IX, No. 3*) possibly designed to represent a bird, the other a side-notched triangular projectile point (*Plate IX, No. 5*), 38 mm. long, 12 mm. wide at the base and 3 mm. thick.

Bone. 10

The bone artifacts include the tip of what was probably a small harpoon; one complete awl (*Plate IX, No. 4*), 132 mm. long, fashioned from a long bone of a large mammal; a fragment of a similar awl (*Plate IX, No. 6*); three small splinter awls; two beads (*Plate IX, Nos. 1 and 2*), 25 and 32 mm. long, fashioned from the leg bone of a bird about the size of a small goose; and two needles or awls, each 44 mm. long, made from the spine bones of catfish.

Teeth. 1

A beaver incisor chisel.

POTTERY (*Plate X*)

The Iroquois sherds excavated were generally small, and in a poor state of preservation. Both the absence of coil breaks and the laminated texture of the sherds indicate a paddle-and-anvil method of manufacture.

Tempering is of decomposed gneiss, possibly some granite, and sand, though whether or not the sand was used intentionally is not known. The sand could have been included accidentally, for the clay beds along the Little Sauble River, from which the Indians probably got their clay, are covered by a thick sand deposit. Sherds exhibit great variation in both the size and quantity of tempering employed. Inspection of both old and new breaks on body sherds indicates an average size of well under 2 mm., though occasionally a piece of tempering material approaches 4 mm.

Organic material in the form of small flecks of carbon, as well as a dark streak in the centre of many sherds, show that in the firing process oxidation was incomplete. Thickness of body sherds varies from 3 to 15 mm., with an average of about 8 mm. Sherds range in colour from light tan to dark grey.

With the exception of two vessels, the rims represent well known pottery types. As these have already been described by MacNeish (1952), illustrations will only be of typical specimens, together with a Lalonde High Collar rim as described by Ridley (1952) (*Plate X, No. 10*).

A total of seventy-three analysable Iroquois rims were recovered, representing a minimum of twenty-five different pots. These occurred in the following frequency:

	NO. OF RIMS	NO. OF POTS
Lawson Incised	17	6
Pound Necked	10	4
Ontario Horizontal	9	3
Lalonde	9	1
Ripley Plain	8	2
Iroquois Linear	5	1

Huron Incised	4	2
Middleport Oblique	3	2
Lawson Opposed	3	2
Miscellaneous	5	2
Totals	73	25

Two pots placed in the Miscellaneous category are described below.

Miscellaneous Pot A (Plate X, No. 1)

Four rim-sherds of this pot were recovered. The vessel is approximately 228 mm. in diameter with a slightly outflaring rim and an incipient collar 19 mm. high. The collar itself is very irregular, disappearing completely in some places, while at others it is 11 mm. thick. Immediately below the collar, the sherds are a uniform 9 mm. in thickness. The rim of the vessel presents a scalloped effect due to multiple castellations, 5 mm. high, with peaks between 32 and 51 mm. apart.

Decoration is present on the collar, the lip and the interior of the rim; the body is plain. Exterior decoration consists of corded impressions in oblique lines, 6 mm. apart and sloping downwards to the left at about 30 degrees. These were probably made by twisting together in a counter-clockwise direction two cords, each 2 mm. in diameter, and pressing them lightly into the wet clay. Examination of the design elements under a ten-power glass shows that the smaller cords were fashioned by twisting together some coarse, fibrous material, probably sinew, in a clockwise direction.

Immediately below the corded design, and almost at the bottom of the collar, is an irregular row of shallow, oval punctations, 6 mm. apart. Faint grooves in the bottoms of these depressions are almost identical with the marks of the individual fibres in the corded impressions. Comparison of the pattern of these faint grooves in the punctations shows that they were all made by the same tiny lump of fibrous material. In experiment, an identical pattern of impressions was made by tying a knot in a piece of string, tying the knotted string around the end of a lead-pencil, and then pressing the knot gently into a piece of plasticine. While we do not know the method of application employed by the Indians, we can be almost certain that the punctations were made by a single knot in a string of some fibrous material, probably sinew.

Decoration on the lip is very irregular, consisting of closely spaced, shallow notches, roughly at right angles to the rim. On the interior of the rim, a second row of punctations exists directly opposite the exterior row, and apparently made by the same implement.

Miscellaneous Pot B (Plate X, No. 2)

The other Iroquois pot in this category is represented by a single rim sherd 76 mm. high and 63 mm. wide. Decoration, which extends down-

wards two inches from the slightly splayed-out and grooved lip, consists of opposed triangles of closely spaced, corded impressions, all apparently made by the same cord. Below this decoration the body of the vessel is smooth. The interior surface of the sherd is missing.

Seed Pot (Plate X, No. 9)

The only other pottery fragment is from a seed pot, 82 mm. in diameter and about 63 mm. high, with a single incipient castellation.

Pipe

Only one pipe fragment was excavated, a portion of a bowl with two narrow, incised lines encircling it immediately below the lip. Towards the bottom of the fragment, four horizontal and parallel scratches suggest that this design was continued about one-third of the way around the bowl, opposite the stem.

CONCLUSIONS

Because of the marked similarity between the pottery types here and at the Middleport site (see Wintemberg, 1948, pp. 30 ff. cf. MacNeish, 1952), and in the absence of such late types as Seed Incised and Warminster Horizontal, it seems fairly clear that we are dealing with an early Iroquoian complex. This position within the Iroquois sequence is also suggested by the high percentage of rim-sherds with interior channelling and small, multiple castellations (Emerson, 1955, p. 6). According to the conservative estimates of MacNeish (MacNeish, 1952, p. 86, *et al.*), the pottery types present at Inverhuron are from the Early or Transitional period of Iroquois development which he places approximately between A.D. 1100–1350.

The Iroquois site excavated at Inverhuron probably represented not a village, but a fishing station occupied only during spring and early summer. This raised two interesting questions. Where was the winter village of these people and over how many years was the summer camp occupied? We were not able, in the limited time at our disposal, to investigate the first of the problems. Mr. Knechtel, however, kindly showed us a small village site near Port Elgin which produced similar pottery. We cannot, of course, associate the fishing station at Inverhuron with this particular site, but we do know that Bruce County was not only visited but inhabited some seven hundred years ago by a group whose pottery exhibits close stylistic similarities with that of the Middleport site (cf. Lee, 1952, p. 70), as well as with Ridley's Lalonde material (Ridley, 1952).

We were even less successful in answering the second question. A study of both the vertical and horizontal distribution of the pottery types, however, revealed none of the stylistic differences we might expect to find if the station had been repeatedly visited over a very long period.

Summary The Inverhuron Bay area was occupied more or less continuously from *circa* 1000 B.C. to *circa* A.D. 1300.

The earliest known inhabitants, whose culture we have called Inverhuron Archaic, were migratory hunters and fishermen who probably visited the region intermittently over a very long period of time. Association of these archaic deposits with a series of raised beaches suggests that at the time the region was first visited the level of Lake Huron may have been some thirty feet higher than its present elevation of 580 feet above sea level. A C-14 date of 2,900±75 years was obtained from a charcoal sample taken from the bottom of a pit in these Archaic deposits. The relationship between Inverhuron Archaic and Archaic cultures from the surrounding areas elsewhere is at present extremely obscure though this problem may well be solved by further excavation at this or some neighbouring site.

Between the Archaic deposits and the shore of Inverhuron Bay, but much nearer the lake, a few isolated patches of Point Peninsula material were found, the majority under a heavy overburden of wind-blown sand. Pottery from these Point Peninsula deposits is apparently identical with that from the Burley site, some eighty miles to the south, for which a C-14 date of 2,619±220 years has been established. Typologically, this pottery bears little resemblance to Point Peninsula pottery illustrated in the various archaeological site reports from other areas in Ontario or from New York state. The Inverhuron Point Peninsula material thus supports the contention that throughout much of the Woodland period, and possibly much of the Iroquois as well, southern Ontario was a relatively independent centre of cultural development.

Somewhat nearer the lakeshore than the Point Peninsula deposits some Late Woodland material was found, underlying Iroquois deposits, and scattered about a single large hearth. Although the sample was extremely small, it was established that a number of chipped slate, ulu-like knives were associated with Late Woodland pottery. Their form, as well as the pattern of wear which they exhibit, suggests that they were used for scaling and cleaning fish.

The most recent aboriginal visitors were the Iroquois, a group that probably visited the site mainly in the spring and early summer, maintaining a permanent residence elsewhere in Bruce County or its environs. Apart from a few miscellaneous sherds, the Iroquois pottery types at Inverhuron are well known, enabling us to place the culture in the Transitional Iroquois period of *circa* A.D. 1100 to 1350. During this period the Iroquois population of Ontario was probably centred along the north shore of Lake Erie, as the majority of known sites of that date are located there. Recent investigations, however, suggest that this early population extended, however thinly, as far north as the southern fringe of the Canadian Shield (cf. Ridley, 1952).

APPENDIX: *Faunal Remains Identified at Inverhuron*

ARCHAIC CULTURE

MAMMAL	Beaver	Castor canadensis
	Whitetail deer	Odocoileus virginianus
FISH	Channel catfish	Ictalurus punctatus

EARLY WOODLAND (POINT PENINSULA) CULTURE

MAMMAL	Beaver	Castor canadensis
FISH	Channel catfish	Ictalurus punctatus

IROQUOIS CULTURE

MAMMAL	Black bear	Ursus americanus
	Fisher	Martes pennanti
	Otter	Lutra canadensis
	Red fox	Vulpes vulpes
	Domestic dog	Canis familiaris
	Woodchuck	Marmota monax
	Eastern chipmunk	Tamias striatus
	Red squirrel	Tamiasciurus hudsonicus
	Beaver	Castor canadensis
	Deer mouse	Peromyscus maniculatus
	Porcupine	Erethizon dorsatum
	Eastern cottontail	Sylvilagus floridanus
	Wapiti	Cervus canadensis
	Whitetail deer	Odocoileus virginianus
BIRD	Common loon	Gavia immer
	Duck	Anas sp.
	Passenger pigeon	Ectopistes migratorius
FISH	Yellow walleye	Stizostedion vitreum
	Smallmouth bass	Micropterus dolomieui
	Common or white sucker	Catostomus commersoni
	Channel catfish	Ictalurus punctatus
	Lake trout	Salvelinus namaycush

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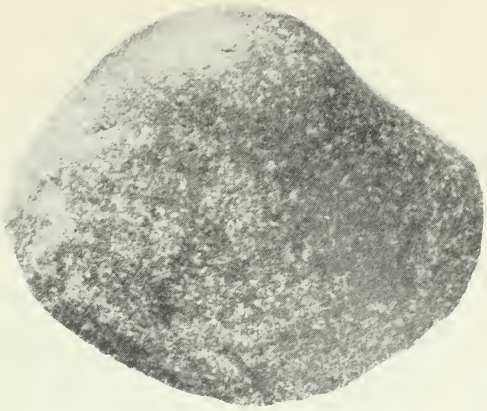
PLATE III *Archaic FlakeTools*

1. Conchoidal Flake or "Bust-off"
   Cat. No. XM.s.2
2. Conchoidal Flake or "Bust-off"
   Cat. No. XM.s
3. Conchoidal Flake or "Bust-off"
   Cat. No. XT.2
4. Conchoidal Flake or "Bust-off"
   Cat. No. XT.s
5. Conchoidal Flake or "Bust-off"
   Cat. No. XR.8g.1

SCALE: ½ Natural Size



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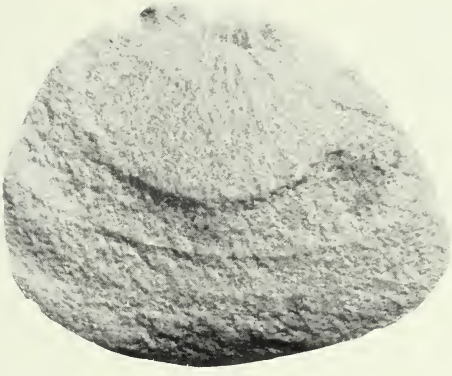

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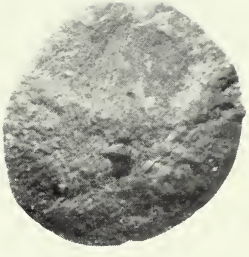

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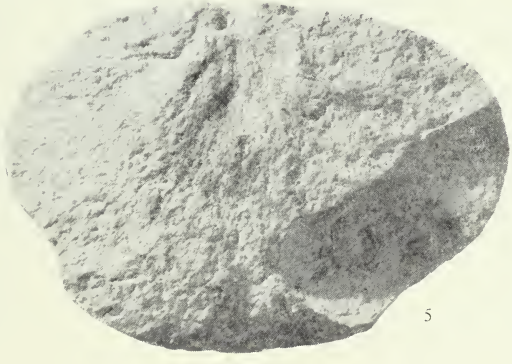

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PLATE IV *Archaic Projectile Points*

1. Un-notched Projectile Point
   Cat. No. XR.8a.3.1
2. Un-notched Projectile Point
   Cat. No. XR.8c.5
3. Un-notched Projectile Point
   Cat. No. XR.8k.2
4. Un-notched Projectile Point
   Cat. No. XR.8k.1.2
5. Stemmed Projectile Point
   Cat. No. XR.7d.3
6. Stemmed Projectile Point
   Cat. No. XM.s
7. Stemmed Projectile Point
   Cat. No. XR.8l.1
8. Corner-notched Projectile Point
   Cat. No. XR.8b.2
9. Corner-notched Projectile Point
   Cat. No. XR.8i.1
10. Corner-notched Projectile Point
    Cat. No. XR.8b.1
11. Side-notched Projectile Point
    Cat. No. XR.8g.2
12. Side-notched Projectile Point
    Cat. No. XR.w.1
13. Side-notched Projectile Point
    Cat. No. XT.1
14. Side-notched Projectile Point
    Cat. No. XR.8l.2
15. Side-notched Projectile Point
    Cat. No. XR.8g.1

SCALE: Natural Size

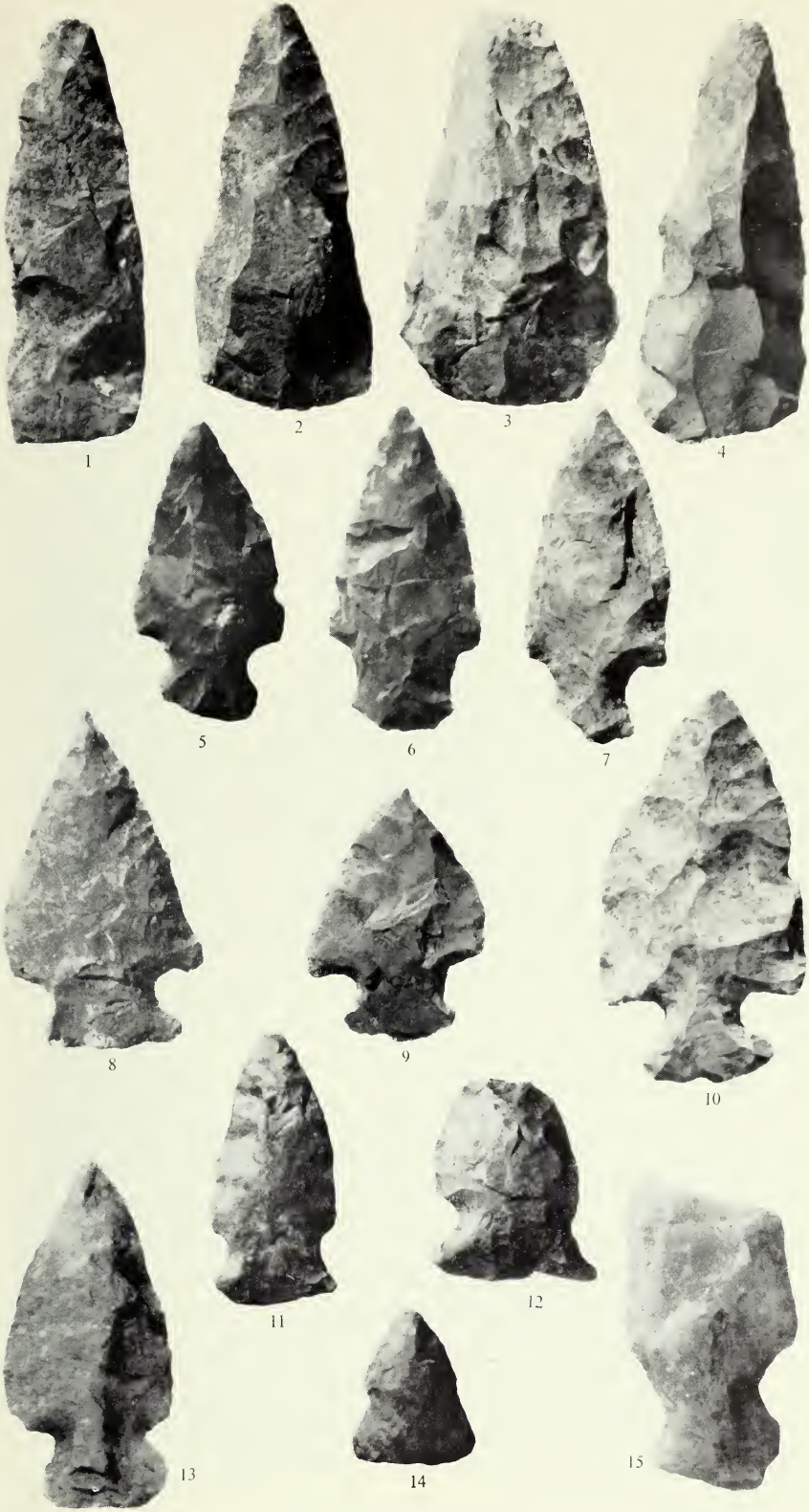
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PLATE V *Miscellaneous Archaic Artifacts*

1. Worked Beaver Incisor
   Cat. No. XR.8f.2
2. Worked Beaver Incisor
   Cat. No. XR.7f.2
3. Mammal Bone Chisel or Graver
   Cat. No. XR.8i.1
4. Copper Harpoon(?)
   Cat. No. XR.5h.1
5. Flint Knife(?)
   Cat. No. XR.7d.1
6. Drill-base of Red Flint
   Cat. No. XR.7g.1
7. Celt
   Cat. No. XR.5h.2

SCALE: Natural Size

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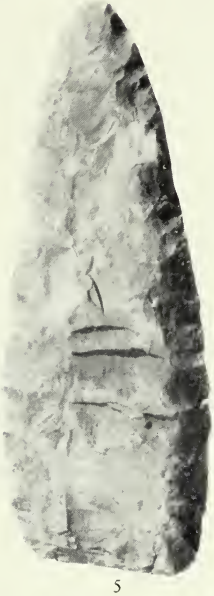

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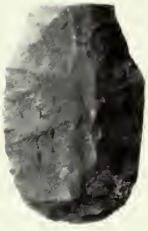

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PLATE VI *Miscellaneous Early Woodland (Point Peninsula) Artifacts*

1. Beaver Incisor Chisel
   Cat. No. XD.10m.1.2
2. Awl fashioned from the Dorsal Spine of a Channel Catfish
   Cat. No. XD.23h.4.2
3. Splinter Awl
   Cat. No. XD.
4. Fish-hook of Native Copper
   Cat. No. XD.25i.1.1
5. Arrow Point
   Cat. No. XD.W.1
6. Spear Point
   Cat. No. XD.10m.1.1
7. Spear Point
   Cat. No. XD.W.12
8. Scraper
   Cat. No. XD.23f.1.6
9. Scraper
   Cat. No. XD.23g.3.1
10. Net-sinker
    Cat. No. XD.W.6
11. Net-sinker
    Cat. No. XD.10p.1.1
12. Net-sinker
    Cat. No. XD.8m.2.1

SCALE: 1–9 Natural Size
10–12 ½ Natural Size

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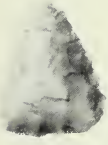

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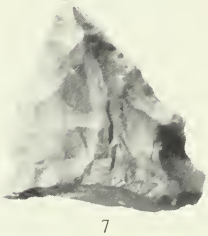

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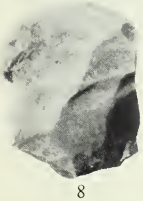

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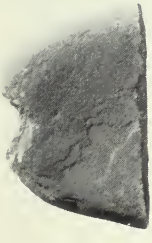

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PLATE VII *Early Woodland (Point Peninsula) Pottery*

1. Rim-sherd
   Cat. No. XD.23h.4.1
2. Aberrant Rim-sherd
   Cat. No. XD.9n.1.10
3. Aberrant Rim-sherd
   Cat. No. XD.11o.1.5
4. Aberrant Rim-sherd
   Cat. No. XD.22f.2.1
5. Incised Body-sherd
6. Body-sherd with Fine Rocker-stamping
7. Base of Vessel
   Cat. No. XD.8o.1.1
8. Body-sherd
9. Body-sherd
   Cat. No. XD.23n.3.1
10. Body-sherd with Coarse Rocker-stamping
11. Striae on Interior of Body-sherd
12. Typical Inverhuron Dentate Rim-sherd
    Cat. No. XD.8m.1.1
13. Typical Inverhuron Dentate Rim-sherd
    Cat. No. XD.22f.3.1
14. Typical Inverhuron Dentate Rim-sherd
    Cat. No. XD.23f.2.1
15. Partly Restored Inverhuron Dentate Vessel
    Cat. No. XC.2c.1.1
16. Aberrant Inverhuron Dentate Rim-sherd
    Cat. No. XD.9n.1.6

SCALE: ½ Natural Size


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PLATE VIII *Miscellaneous Late Woodland Artifacts*

1. Partly Restored Vessel
   Cat. No. XB.22a.4.14
2. Rim-sherd with Corded Punctate Design
   Cat. No. XA.21t.4.1
3. Aberrant Fabric-impressed Rim-sherd
   Cat. No. XB.39n.3.4
4. Chopper
   Cat. No. XA.22r.3.1
5. Chipped Slate Fish-scaler (?)
   Cat. No. XA.23t.2.2
6. Chipped Slate Fish-scaler (?)
   Cat. No. XA.23t.3.2
7. Chipped Slate Fish-scaler (?)
   Cat. No. XA.21s.2.6
8. Chipped Slate Fish-scaler (?)
   Cat. No. XA.23t.2.1
9. Chipped Slate Fish-scaler (?)
   Cat. No. XA.23s.3.1

SCALE: ½ Natural Size


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PLATE IX *Miscellaneous Iroquois Artifacts*

1. Bone Bead
   Cat. No. XA.22s.2.1
2. Bone Bead
   Cat. No. XA.20s.3.2
3. Carved Antler Object
   Cat. No. XB.41n.2.1
4. Bone Awl
   Cat. No. XA.20r.2.1
5. Antler Projectile Point
   Cat. No. XA.22s.1.2
6. Bone Awl
   Cat. No. XB.39n.3.1
7. End-scraper
   Cat. No. XA.22s.3.8
8. Knife (?)
   Cat. No. XB.37n.2.1
9. Projectile Point
   Cat. No. XA.22s.3.3
10. Projectile Point
    Cat. No. XA.21g.2.1
11. Projectile Point
    Cat. No. XA.22s.2.4

SCALE: Natural Size

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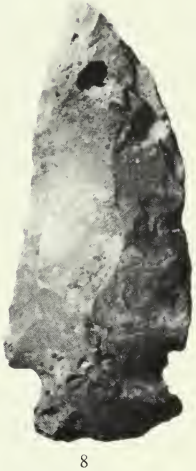

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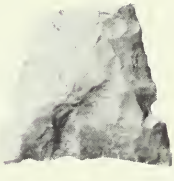

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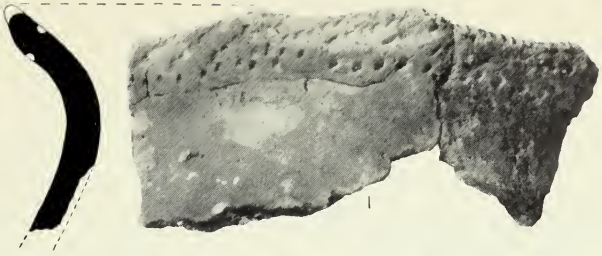
PLATE X *Iroquois Rim-sherds*

1. Aberrant Corded Sherd
   Cat. No. XA.22r.1.3
2. Aberrant Corded Sherd
   Cat. No. XB.w.5
3. Ontario Horizontal
   Cat. No. XA.21t.3.2
4. Ontario Horizontal
   Cat. No. XA.14n.1.1
5. Ontario Horizontal
   Cat. No. XA.25s.1.1
6. Castellation
   Cat. No. XA.w.13
7. Lawson Incised
   Cat. No. XA.14m.1.1
8. Iroquois Linear
   Cat. No. XA.21t.4.6
9. Seed Pot
   Cat. No. XA.22t.2.1
10. Lalonde High Collar
    XA.23r.1.5
11. Ripley Plain
    XA.21s.1.1
12. Pound Necked
    Cat. No. XA.22t.3.3

SCALE: ½ Natural Size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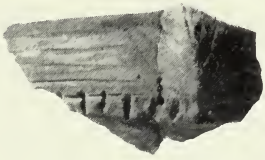
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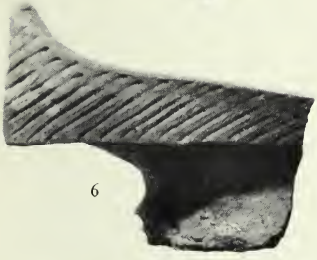
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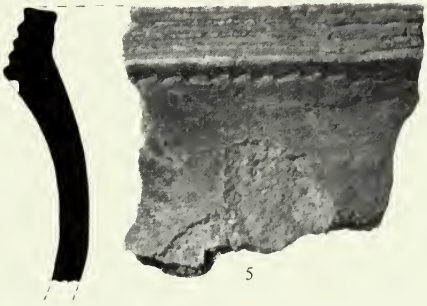
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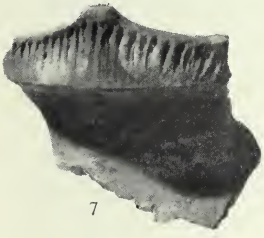
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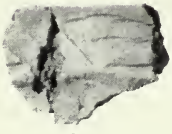
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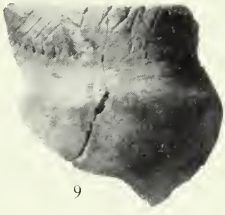
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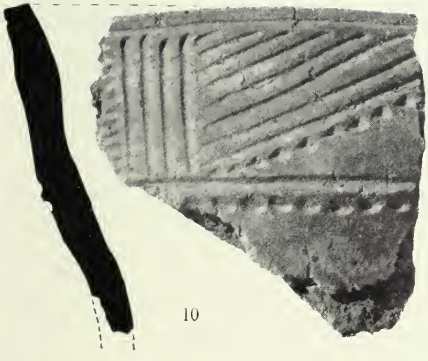
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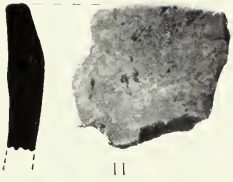
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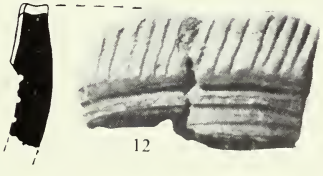
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